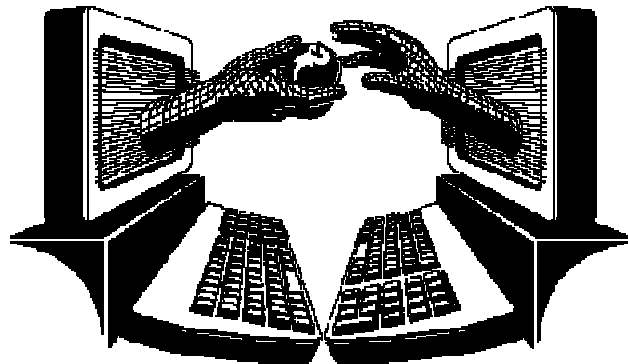


# **Review of Kansas Emergency Medical Services Professional Data**

**1998-2001 Trends**

## **Health Care Data Governing Board**

**Lorne A. Phillips Ph.D, Chairman**



**May 2002**

# Review of Kansas Board of Emergency Medical Services Professional Data

1998-2001 Trends

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## **Executive Summary**

The following trends were observed in EMS Certification between 1998 and 2001:

- The total number of EMS attendants, certified by and with mailing addresses in Kansas increased slightly in 2001 over 2000.
- The number of EMS attendants per capita has increased since 1998.
- The Semi-Urban and Densely-Settled Rural regions had the greatest increase in EMS attendants per population while the Rural regions had a comparable decrease.
- A greater proportion of the Frontier region EMS attendants worked as volunteers or part time workers, particularly in regards to Ambulance Service, while the majority of Urban regions EMS attendants worked full time.
- A lower proportion of attendants in the Rural (24%) and Frontier (7%) regions worked First Response than in Urban counties (42%).
- The majority of EMS attendants who worked First Response in the Rural and Frontier counties in 2001 were volunteers.
- In 2001, a higher percentage of EMS attendants in Urban counties were Emergency Medical Technicians and Mobile Intensive Care Technicians.
- In 2001, a higher percentage of EMS attendants in Rural and Frontier counties were Emergency Medical Technicians-Intermediate, Emergency Medical Technicians-Defibrillator, First Responders, and Emergency Medical Technicians-Intermediate-Defibrillator.
- The level of education for EMS attendants has changed. From 1998 to 2001 there has been a 5.6% decrease in High School only EMS attendants, a 2.4% decrease in EMS attendants with some college, and increases ranging from 2.7% to 7.9% in higher education levels (i.e. 2 yrs of college through Doctorate).
- The Gender percentage relationships remained steady within the Rural and Frontier Regions, maintaining a substantially greater percentage of Female attendants than the other regions.
- The average age of EMS attendants has remained relatively constant, around 40 years of age.

## **Introduction**

This document “Review of the Kansas Board of Emergency Medical Services Professional Data” is part of a series of publications requested by the Health Care Data Governing Board (HCDGB) to make information available about the health care system in the state of Kansas. A brief summary regarding this request for an inventory of health care professionals, of which this document is a part, can be found in the series preface at the beginning of the associated notebook.

Information presented in this document provides an overview of the types of Emergency Medical Service Professionals certified by the Kansas State Board of Emergency Medical Services; specifically: Emergency Medical Technicians, Mobile Intensive Care Technicians, Emergency Medical Technicians-Intermediate, Emergency Medical Technicians-Defibrillator, First Responders, and Emergency Medical Technicians-Intermediate-Defibrillator.\* This report is based on the credentialing data submitted to the Health Care Data Governing Board (HCDGB) by the Kansas Board of Emergency Medical Services for the second quarter of 1998, 1999, 2000, and 2001 which includes data on all EMS attendants with an active certification during that year. The selection of the second quarter data gives the best stabilized view of EMS attendants due to renewal processes. EMS attendants were required to renew their certification every twelve months until 2000, when alternate year credentialing was phased in during 2000 and 2001.

The data collected by the EMS Board does not include practice locations or business addresses for EMS attendants. Therefore, practice locations can only be inferred from mailing addresses. Data was missing from no more than two observations per variable per year. Data was not imputed to replace missing data. There may be a slight variance between table totals due to missing data and variance in state and national data collection dates. A list of the data fields collected by the EMS Board is provided in Appendix A.

\* See pages 5-9 for certification levels definitions.

## Emergency Medical Services Attendants

The Kansas State Board of Emergency Medical Services (EMS) credentials Emergency Medical Services attendants by six classifications.

1. Emergency Medical Technicians
2. Mobile Intensive Care Technicians
3. Emergency Medical Technicians-Intermediate
4. Emergency Medical Technicians-Defibrillator
5. First Responders
6. Emergency Medical Technicians-Intermediate-Defibrillator

Individuals credentialed by the Emergency Medical Services Board are collectively referred to as EMS attendants throughout the report.

In 2001, the Kansas State Board of Emergency Medical Services credentialed 9,849 EMS attendants in the State of Kansas. This represents an increase of 188 from 1998 when the Board credentialed 9,661 EMS attendants (see Table 1). Of those EMS attendants credentialed by the Board in 2001, 9,263 had mailing addresses in Kansas (see Table 1). Of the 586 certified in Kansas in 2001 who listed out-of-state mailing addresses, 489 listed mailing addresses in the bordering states of Missouri (417), Colorado (15), Nebraska (12), and Oklahoma (45).

**Table 1: EMS Attendants 1998-2001**

EMS ATTENDANTS	1998	1999	2000	2001	Change	Percent Change
Total Credentialed	9,661	9,962	9,801	9,849	188	1.95%
Mail Addresses in KS	9,284	9,504	9,227	9,263	-21	-0.23%
Persons per Attendant	283.2	279.3	291.4	290.1	6.86	2.42%

In evaluating and comparing staffing of EMS attendants, counties in Kansas have been grouped into 5 Regions. These Regions are based upon population density peer groups as adopted by the Office of Local and Rural Health (OLRH).

They are:

Urban	150.0 or more persons per sq. mi.
Semi-Urban	40.0 - 149.9 persons per sq. mi.
Densely-Settled Rural	20.0 - 39.9 persons per sq. mi.
Rural	6.0 - 19.9 persons per sq. mi.
Frontier	Less than 6.0 persons per sq. mi.

where . . .

Population Density = Total Population / Land Area in Square Miles.

These divisions are based upon the 2000 census report to determine number of persons per square mile. The counties making up each region and their population densities are mapped on page 5, Figure 1 and listed in Appendix B, Table I (Density Distribution of Counties).

Table 2 shows the number of people per EMS attendant by the 5 Regions over a 4-year period. Between 1998 and 2001 the number of persons per EMS attendant increased by 7. Each county is assigned by region (refer to Figure 2, page 6).

**Table 2: Population Compared by Density Region**

POP. / ATTENDANTS	1998	1999	2000	2001	Change	Percent Change
Urban	396	390	406	395	-1	-0.25%
Semi-Urban	320	312	330	332	12	3.67%
Densely-Settled Rural	259	263	258	262	3	1.13%
Rural	164	157	164	161	-2	-1.83%
Frontier	112	111	115	119	7	6.23%
Total/Average	250	247	255	254	4	1.60%

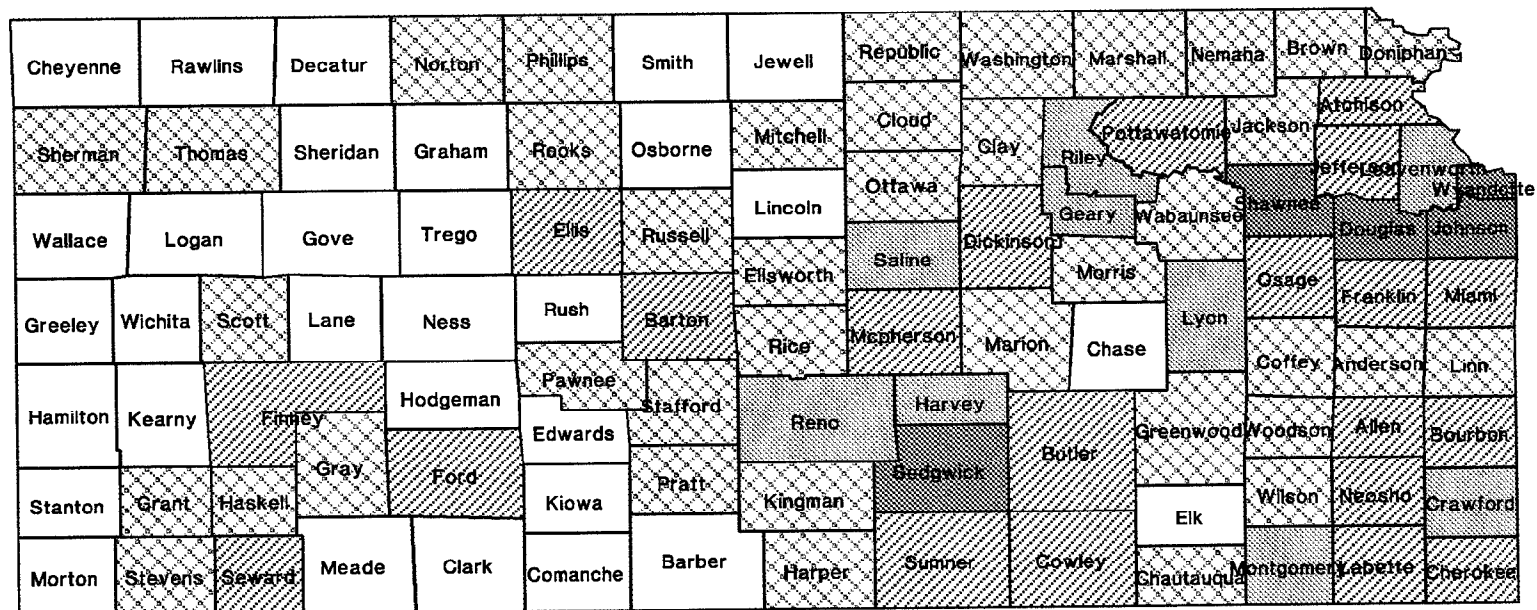
In the 2001 comparison of the rankings of persons per EMS attendant revealed that Kansas ranked 26 out of 51 states. Among the adjacent states only Missouri had a lower ranking than Kansas. The national ratio of persons per EMS attendant was 298.1 in 2001. The Kansas ratio for the same time period was 255.4 persons per EMS attendant (see Appendix B, Table A).

Kansas has more EMS attendants per person than the national ratio (see Appendix B, Tables A, C, E and G). Historically and presently, the more densely settled the area, the greater the number of persons per EMS attendants. This is apparent at both the national and state levels (see Appendix B, Tables A-H).






## Population Density of Counties

5 Regions (see Appendix B, Table I)

### Figure 1



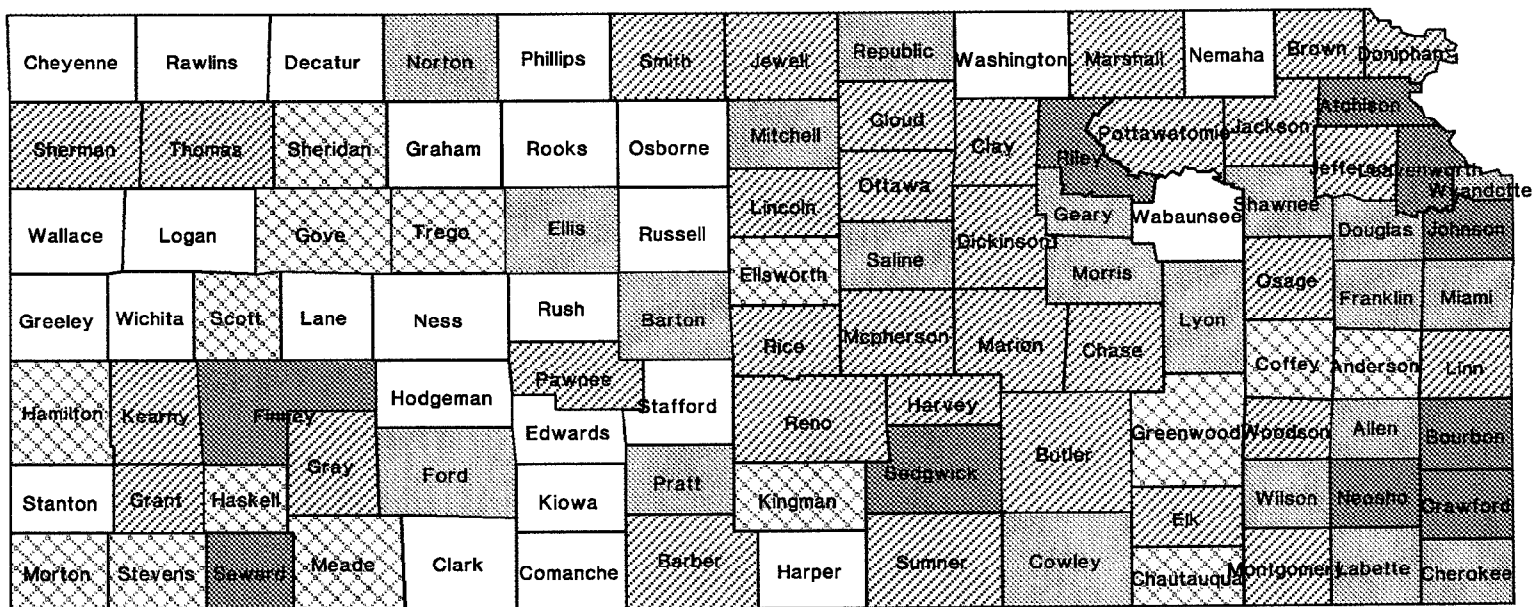
**Population per square mile**

	Frontier, less than 6
	Rural, 6-19.9
	Dens. Set. Rural, 20-39.9
	Semi-Urban, 40-149.9
	Urban, 150+






## Residents per EMS Attendant

2001 Information (see Appendix B, Table B)

### Figure 2



**EMS concentration by County**

	119 or less
	120 - 161
	162 - 262
	263 - 350
	351 and up

## Demographics for Kansas EMS Attendants

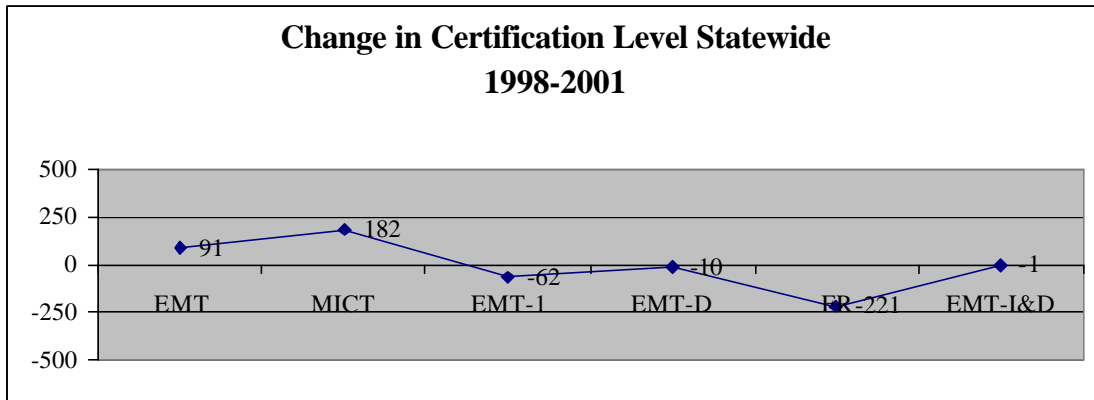
### Certification Levels

Between 1998 and 2001 there was a slight decrease of 21 EMS attendants (with mailing addresses in Kansas). The most significant increase was 182 attendants certified as Mobile Intensive Care Technicians. The most significant decrease was 221 attendants certified as First Responders (see Table 3 and Figure 3).

**Table 3: Attendants by Certification Level**

Certification Level	1998	1999	2000	2001	Change	Percent Change
Emergency Medical Technician	5,470	5,641	5,428	5,561	91	1.66%
Mobile Intensive Care Technician	1,092	1,179	1,227	1,274	182	16.67%
Emergency Medical Technician-Intermediate	945	934	900	883	-62	-6.56%
Emergency Medical Technician-Defibrillator	150	152	150	140	-10	-6.67%
First Responders	1,167	1,098	1,026	946	-221	-18.94%
Emergency Medical Technician-Intermediate-Defibrillator	460	500	496	459	-1	-0.22%
Total	9,284	9,504	9,227	9,263	-21	-0.23%

**Figure 3**



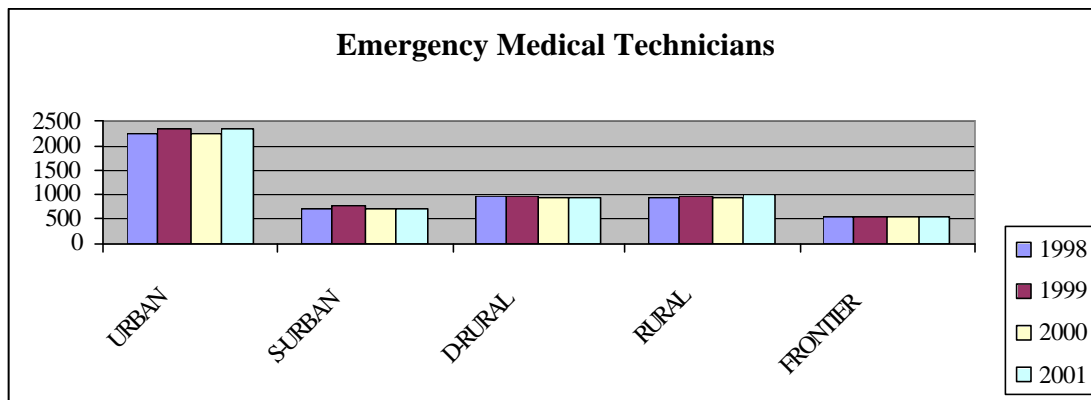
### Emergency Medical Technicians

An Emergency Medical Technician (EMT) is a person who has successfully completed a course of training approved by the Board in preliminary emergency medical care and who holds valid certification as an EMT (K.S.A. 65-6112, effective 7-1-94).

*The number of EMTs increased 1.6% between 1998 and 2001. As of December 2001, there were 5,561 EMTs credentialed in the State of Kansas. This represents an increase of 133 from the 5,428 EMTs credentialed in 2000 and a decrease of 80 from 1999 when 5,641 EMTs were credentialed in Kansas.*

The following Figure 4 shows the distribution of EMTs across the state by density regions. The number of attendants has remained relatively constant over the 4-year evaluation period.

**Figure 4**



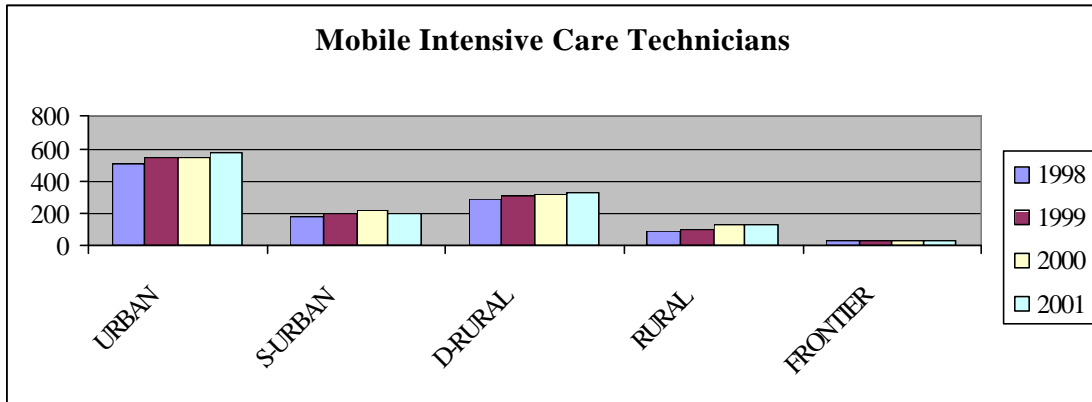
### **Mobile Intensive Care Technicians**

A Mobile Intensive Care Technician (MICT) is a person who has successfully completed a course of training approved by the Board in emergency medical care, and who holds a valid MICT certification (K.S.A. 65-6112, effective 7-1-94).

*The number of MICTs increased 16.7 percent between 1998 and 2001. As of December 2001, there were 1,274 MICTs credentialed in the State of Kansas. This represents an increase of 47 from the 1,227 MICTs credentialed in 2000 and an increase of 95 from 1999 when 1,127 MICTs were credentialed in Kansas.*

The following Figure 5 shows the distribution of MICTs across the state by density regions. The number of attendants shows slight increases in all districts except the Frontier over the 4 year evaluation period.

**Figure 5**



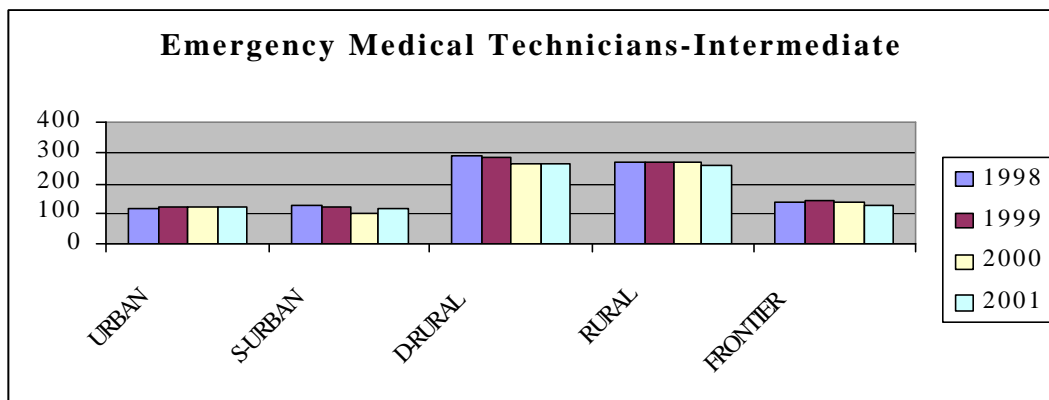
### Emergency Medical Technicians-Intermediate

An Emergency Medical Technician-Intermediate (EMT-I) is a currently certified EMT who has successfully completed a course approved by the EMS Board, which includes training in venipuncture for blood sampling and administration of intravenous fluids and advanced patient assessment (K.S.A. 65-6112, effective 7-1-94).

*The number of EMT-Is decreased 7% between 1998 and 2001. As of December 2001, there were 833 EMT-Is credentialed in the state of Kansas. This represents a decrease of 17 from the 900 EMT-Is credentialed in 2000 and a decrease of 34 from 1999 when 934 EMT-Is were credentialed in Kansas.*

The following Figure 6 shows the distribution of EMT-Is across the state by density regions. The number of attendants shows slight decreases in all regions except the Urban over the 4 year evaluation period.

**Figure 6**



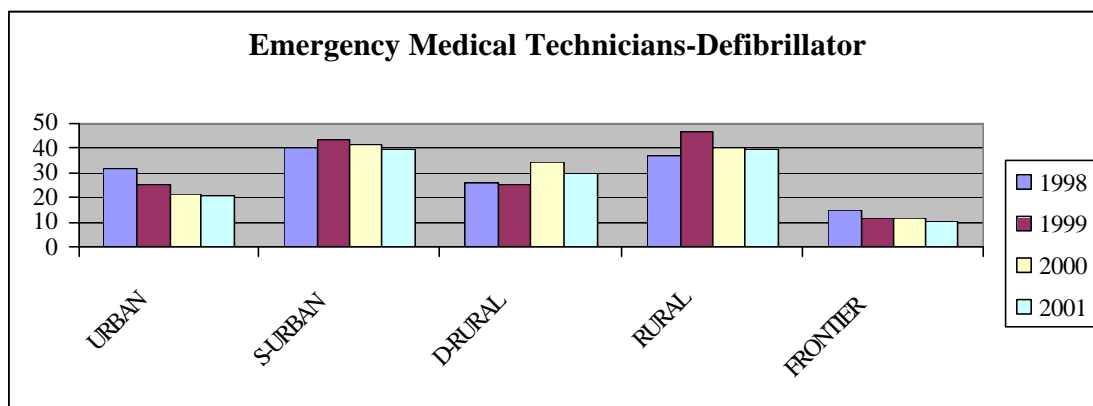
## Emergency Medical Technicians-Defibrillator

An Emergency Medical Technicians-Defibrillator (EMT-D) is a currently certified EMT who has successfully completed a training program in cardiac defibrillation approved by the EMS Board (K.S.A. 65-6112, effective 7-1-94).

The number of EMT-Ds decreased by 10 statewide from 1998 to 2001. As of 2001 there were 140 EMT-Ds credentialed in the State of Kansas. The number of EMT-Ds had remained relatively constant from 1998-2000.

The following Figure 7 shows the distribution of EMT-Ds across the state by density regions. The number of attendants shows a slight decreasing trend in all districts except the Rural over the 4-year evaluation.

**Figure 7**



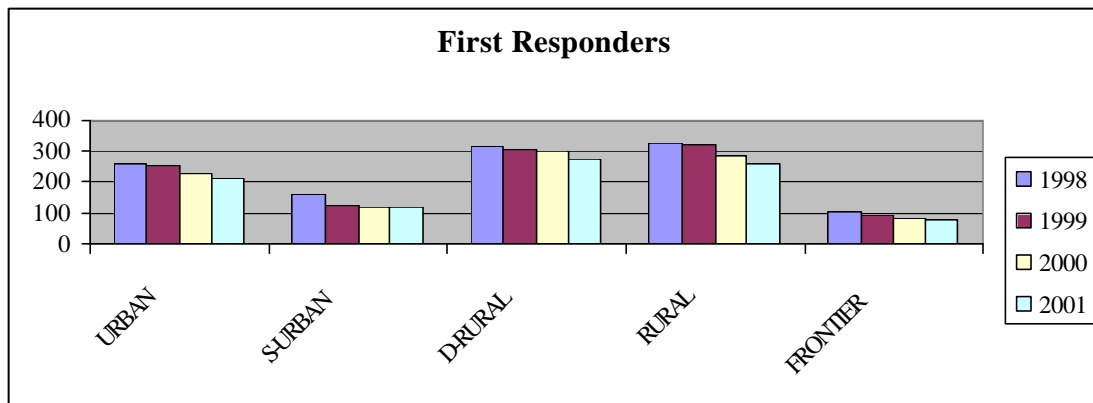
## First Responders

A First Responder (FR) is a person who has successfully completed a 45-clock-hour course of training in preliminary emergency care approved by the EMS Board, and who provides services to those in need of emergency medical care to assist in stabilization or improvement of such individuals' condition until personnel with a higher level of training arrive at the scene and assume responsibility for the individual (K.S.A. 65-6112, effective 7-1-94).

*The number of FRs decreased 18.9% between 1998 and 2001. As of December 2001, there were 946 FRs credentialed in the state of Kansas. This represents a decrease of 80 from the 1,026 FRs credentialed in 2000 and a decrease of 132 from 1999 when 1,098 FRs were credentialed in Kansas.*

The following Figure 8 shows the distribution of FRs across the state by density regions. The number of attendants shows a slight decreasing trend in all regions over the 4-year evaluation.

**Figure 8**



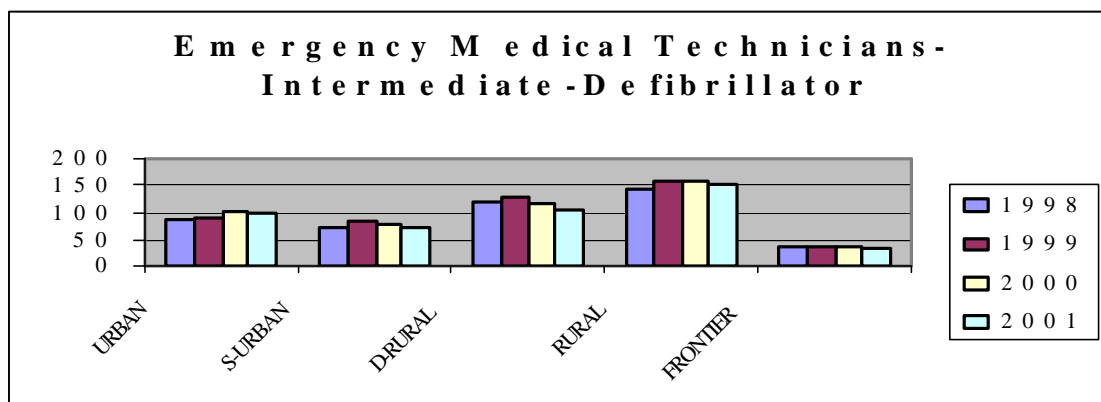
### **Emergency Medical Technicians-Intermediate-Defibrillator**

An Emergency Medical Technician-Intermediate-Defibrillator (EMT-I-D) is a currently certified EMT who has successfully completed a course approved by the Board which includes training in venipuncture for blood sampling, administration of intravenous fluids, advanced patient assessment, and cardiac defibrillation (From K.S.A. 65-6112, effective 7-1-94).

*The number of EMT-I-Ds credentialed by the Kansas EMS Board increased 0.2 percent between 1998 and 2001. As of December 2001, there were 459 EMT-I-Ds credentialed in the State of Kansas. This represents a decrease of 37 from the 496 credentialed in 2000, and a decrease of four from 1999 when 500 EMT-I-Ds were credentialed in Kansas.*

The following Figure 9 shows the distribution of EMT-I-Ds across the state by density regions. The number of attendants shows a fairly stable trend in all regions over the 4-year evaluation, considering the limited number of registrant

**Figure 9**



## Education

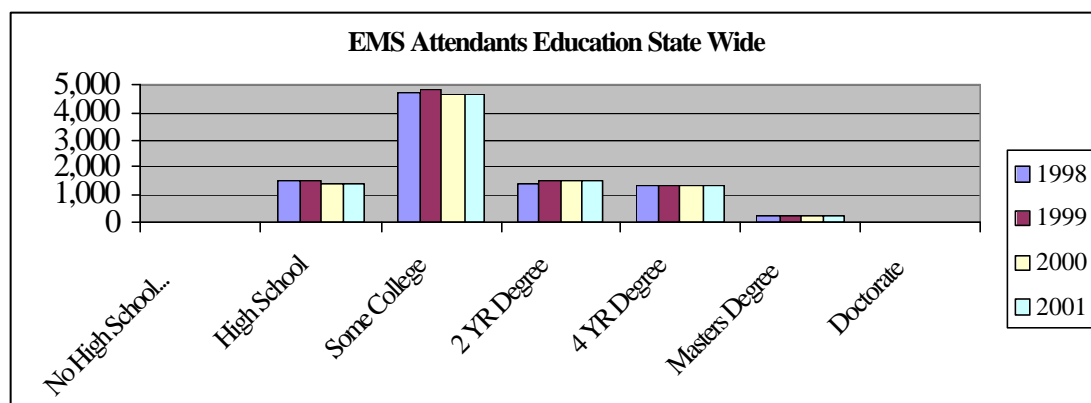
The education level of EMS attendants varies. In 2001, most had some college education and 32 had Doctoral degrees. Between 1998 and 2001, the number of EMS attendants with a High School Diploma and those with some College decreased (-197) while the number of attendants with Two-year, Four-year, Masters and Doctoral degrees increased (+164) (see Table 4).

**Table 4: Education Levels**

EDUCATION	1998	1999	2000	2001	Change 1998/2001	Percent Change
No High School Diploma	23	34	28	34	11	47.83%
High School	1,508	1,524	1,439	1,423	-85	-5.64%
Some College	4,759	4,834	4,660	4,647	-112	-2.35%
2 YR Degree	1,417	1,508	1,510	1,530	113	7.97%
4 YR Degree	1,332	1,353	1,338	1,368	36	2.70%
Masters Degree	214	219	217	228	14	6.54%
Doctorate	31	32	34	32	1	3.23%
Total	9,284	9,504	9,226	9,262	(22)	-0.24%

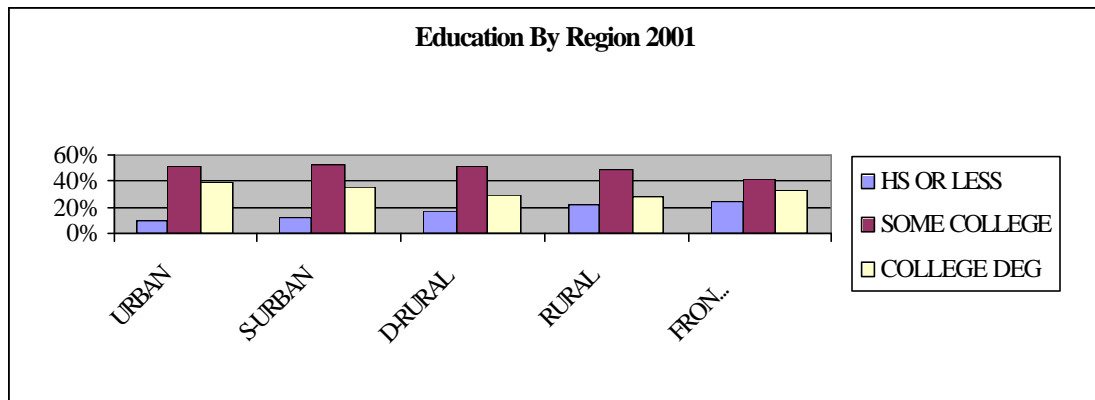
Of the EMS attendants that were Kansas residents, 84% had some college or a degree(s). Figure 10 shows the seven levels of education that are monitored in the certification process.

**Figure 10**



In 2001, Kansas resident EMS attendants whose highest level of education was 'High School diplomas or less' increased as the population density decreased. EMS attendants with some college were relatively equal in all region areas except the Frontier, which was a noticeably smaller percentage. However, the Frontier had a higher percentage of attendants with degrees than the Rural or Densely-Settled-Rural regions (see Figure 11).

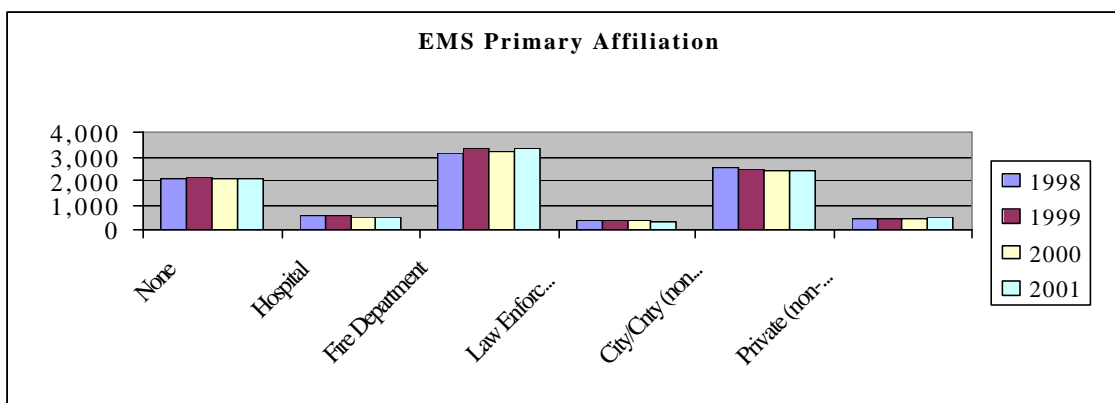
**Figure 11**



## Primary Affiliation

In 2001, 36.5% of the EMS attendants were affiliated with Fire Departments, 26.2% were associated with City/County(non-fire) Departments, and 22.2% indicated no primary affiliation (see Figure 12). Between 1998 and 2001, the number of EMS attendants affiliated with City/County(non-fire), Law Enforcement and Hospitals decreased while EMS attendants affiliated with Fire Departments increased (see Table 5). The decrease (-233) in City/County, Law Enforcement and Hospital affiliation is offset by the increase (+210) in Fire Department affiliation. The bottom line percentage change is less than 1%.

**Figure 12**



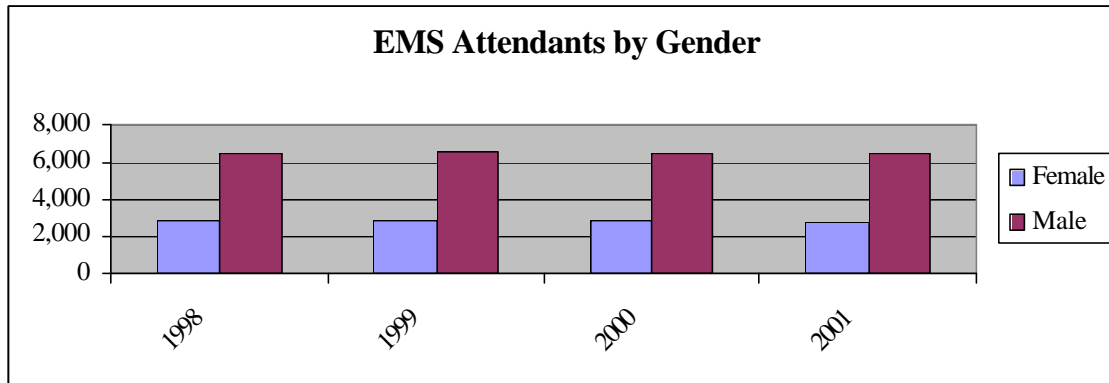
**Table 5: Primary Affiliation**

PRIMARY AFFILIATION	1998	1999	2000	2001	Change	Percent Change
None	2,064	2,192	2,039	2,060	-4	-0.19%
Hospital	594	580	546	547	-47	-7.91%
Fire Department	3,176	3,328	3,231	3,386	210	6.61%
Law Enforcement	407	392	368	354	-53	-13.02%
City/Cnty (non fire dept.)	2,562	2,529	2,458	2,429	-133	-5.19%
Private (non-hospital)	481	480	483	486	5	1.04%
Other	1	3	2	1	0	0.00%
<b>Total</b>	<b>9,285</b>	<b>9,504</b>	<b>9,127</b>	<b>9,263</b>	<b>-22</b>	<b>-0.24%</b>

## Gender

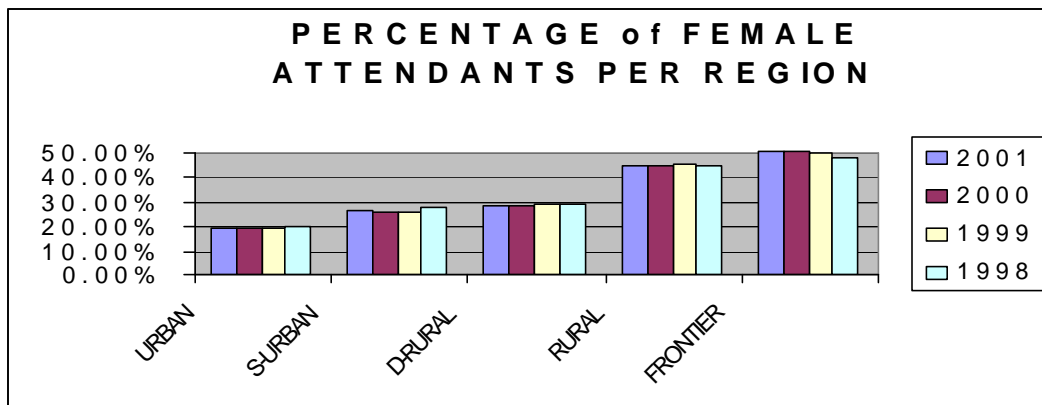
The distribution of EMS attendants by gender in 2001 was 69.8% male and 30.2% female. In 1998 the EMS attendants by gender were 69.4% male and 30.6% female. This percentage relationship has remained very consistent within this 4-year evaluation period (see Figure 13).

**Figure 13**



EMS Gender by county density regions, remains relatively constant. The highest percentage of female attendants is in the Rural (45%) and Frontier (51%) regions, while the lowest percentage is in the Urban (19%) region (see Figure 14 and Table 6).

**Figure 14**



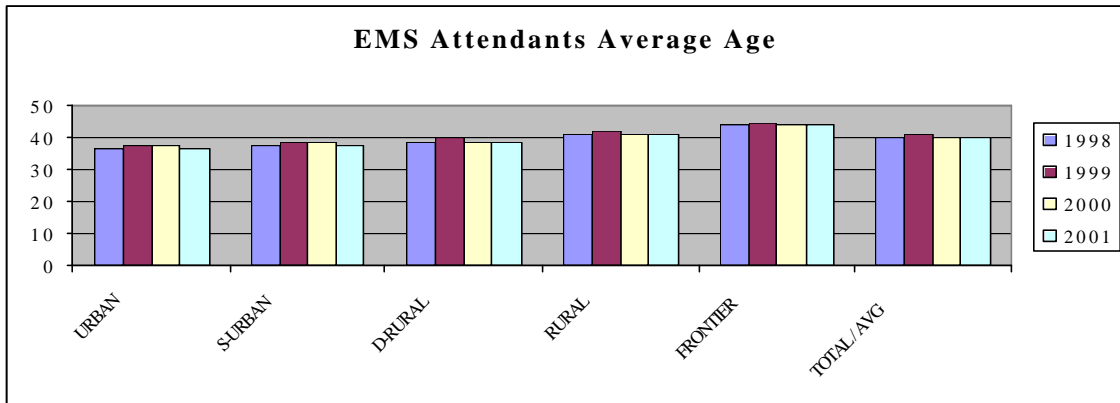
**Table 6: EMS Attendants by Region and Gender**

	Total	Male	% Male	Female	% Female
Urban	3375	2721	80.6%	654	19.4%
Semi-Urban	1268	929	73.3%	339	26.7%
Densely-Settled Rural	1946	1395	71.7%	551	28.3%
Rural	1856	1021	55.0%	835	45.0%
Frontier	818	401	49.0%	417	51.0%

## Age

EMS Attendants' average age of 40 is consistent over the 4-year period of 1998-2001. As expected, the Rural and Frontier regions have a higher average age. Figure 15 shows the average age by region and year. The average age for each region for each year is shown in Table 7. The average age of male and female EMS attendants in the state are similar.

**Figure 15**



**Table 7: Average Age**

AVERAGE AGE	1998	1999	2000	2001
Urban	37	38	38	37
Semi-Urban	38	39	39	38
Densely-Settled Rural	39	40	39	39
Rural	41	42	41	41
Frontier	44	45	44	44
Total/Average	40	41	40	40

**SERVICE AFFILIATION:**

- **FIRE DEPARTMENT**
- **LAW ENFORCEMENT**
- **CITY/COUNTY(NON-FIRE DEPARTMENT)**
- **PRIVATE(NON-HOSPITAL)**

The following Tables (8A-8E) list the number of Kansas residents that are certified as EMS attendants with a Primary Affiliation with an Ambulance Service or a First Response group operated by the following entities: Fire Department, Law Enforcement, City/County (Non-Fire Department), Private (Non-Hospital). The data is sorted by Population Density Region and Gender.

The percentage of female to male attendants associated with City/County (Non-Fire Department) and Private (Non Hospital) is substantially greater in all regions than for Fire and Law Enforcement. With the percentage of female to male attendants increasing and as population density decreases.

**Table 8A: Urban EMS Affiliation**

<b>AFFILIATE</b>	1998			1999			2000			2001		
<b>URBAN</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Fire Dept.	1,636	86	5%	1,590	88	6%	1,600	84	5%	1,600	84	5%
Law Enforcement	147	15	10%	166	12	7%	159	12	8%	159	12	8%
City/County (Non-Fire Department)	261	126	48%	269	136	51%	256	127	50%	256	124	48%
Private (Non-Hospital)	131	51	39%	107	39	36%	114	47	41%	114	47	41%
Total	2,175	278	13%	2,132	275	13%	2,129	270	13%	2,129	267	13%

**Table 8B: Semi-Urban EMS Affiliation**

<b>AFFILIATE</b>	1998			1999			2000			2001		
<b>S-URBAN</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Fire Dept.	469	34	7%	468	35	7%	470	35	7%	470	35	7%
Law Enforcement	46	7	15%	56	10	18%	53	10	19%	53	10	19%
City/County (Non-Fire Department)	148	86	58%	135	83	61%	132	77	58%	132	77	58%
Private (Non-Hospital)	36	28	78%	35	31	89%	34	32	94%	34	32	94%
Total	699	155	22%	694	159	23%	689	154	22%	689	154	22%

**Table 8C: Densely-Settled Rural EMS Affiliation**

<b>AFFILIATE</b>	1998			1999			2000			2001		
<b>D-RURAL</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Fire Dept.	713	100	14%	703	100	14%	708	95	13%	708	95	13%
Law Enforcement	50	11	22%	185	57	31%	181	57	31%	47	8	17%
City/County (Non-Fire Department)	279	171	61%	289	176	61%	286	175	61%	286	175	61%
Private (Non-Hospital)	71	26	37%	89	40	45%	86	35	41%	86	35	41%
Total	1,113	308	28%	1,266	373	29%	1,261	362	29%	1,127	313	28%

**Table 8D: Rural EMS Affiliation**

<b>AFFILIATE</b>	1998			1999			2000			2001		
<b>RURAL</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Fire Dept.	204	67	33%	194	72	37%	193	63	33%	193	63	33%
Law Enforcement	35	9	26%	40	10	25%	33	11	33%	33	11	33%
City/County (Non-Fire Department)	442	397	90%	466	412	88%	455	407	89%	455	407	89%
Private (Non-Hospital)	62	57	92%	53	60	113%	52	57	110%	52	57	109%
Total	743	530	71%	753	554	74%	733	538	73%	733	538	73%

**Table 8E: Frontier EMS Affiliation**

<b>AFFILIATE</b>	1998			1999			2000			2001		
<b>FRONTIER</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Fire Dept.	59	18	31%	56	22	39%	63	20	32%	63	20	32%
Law Enforcement	25	9	36%	24	11	46%	23	12	52%	23	12	52%
City/County (Non-Fire Department)	227	292	129%	262	301	115%	246	297	121%	246	297	121%
Private (Non-Hospital)	15	9	60%	14	12	86%	16	10	63%	16	10	63%
Total	326	328	101%	356	346	97%	348	339	97%	348	339	97%

## SERVICE AFFILIATION: FIRST RESPONSE UNIT

The following Tables (9A-9E) list the number of Kansas residents that are certified as EMS attendants with a Primary Affiliation with an organized first response unit that does not transport patients. The Tables also list the employment status of those EMS attendants (Full Time, Part time, and Volunteer). The data is sorted by Population Density Region and Gender.

The percentage of female to male attendants increases as population density decreases as is consistent with other EMS affiliations.

**Table 9A: Urban EMS First Response Unit Affiliation  
by Employment Status**

FIRST RESPONSE UNIT	1998			1999			2000			2001		
	Male	Female		Male	Female		Male	Female		Male	Female	
Full Time	1,188	45	4%	1,187	44	4%	1,190	41	3%	1,183	40	3%
Part Time	37	7	19%	32	3	9%	26	3	12%	32	5	16%
Volunteer	220	55	25%	293	52	18%	271	49	18%	263	43	16%
Total	1,445	109	8%	1,611	99	6%	1,580	93	6%	1,478	88	6%

**Table 9B: Semi-Urban EMS First Response Unit Affiliation  
by Employment Status**

FIRST RESPONSE UNIT	1998			1999			2000			2001		
	Male	Female		Male	Female		Male	Female		Male	Female	
Full Time	166	6	4%	160	7	4%	153	6	4%	158	7	4%
Part Time	18	5	28%	19	4	21%	19	5	26%	16	3	19%
Volunteer	191	48	25%	186	41	22%	177	38	21%	176	39	22%
Total	434	60	14%	417	52	13%	398	50	12%	350	49	14%

**Table 9C: Densely-Settled Rural EMS First Response Unit Affiliation  
by Employment Status**

FIRST RESPONSE UNIT	1998			1999			2000			2001		
	Male	Female		Male	Female		Male	Female		Male	Female	
Full Time	253	4	2%	256	7	3%	262	6	2%	254	7	3%
Part Time	31	4	13%	28	2	7%	30	2	7%	32	4	13%
Volunteer	400	90	23%	396	90	23%	383	85	22%	357	83	23%
Total	782	98	13%	779	99	13%	768	93	12%	643	94	15%

**Table 9D: Rural EMS First Response Unit Affiliation  
by Employment Status**

<b>FIRST RESPONSE UNIT</b>	1998			1999			2000			2001		
<b>RURAL</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Full Time	58	8	14%	60	7	12%	65	9	14%	63	8	13%
Part Time	24	6	25%	21	5	24%	26	6	23%	25	6	24%
Volunteer	274	103	38%	276	103	37%	261	98	38%	251	85	34%
Total	473	118	25%	472	116	25%	465	114	24%	339	99	29%

**Table 9E: Frontier EMS First Response Unit Affiliation  
by Employment Status**

<b>FIRST RESPONSE UNIT</b>	1998			1999			2000			2001		
<b>FRONTIER</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Full Time	11	2	18%	12	2	17%	11	2	18%	12	2	17%
Part Time	4	3	75%	3	2	67%	3	2	67%	1	1	100%
Volunteer	91	31	34%	78	26	33%	79	26	33%	72	26	36%
Total	142	37	26%	123	31	25%	123	31	25%	85	29	34%

#### **SERVICE AFFILIATION: HOSPITAL**

The following Tables (10A-10E) list the number of Kansas residents that are certified as EMS attendants with a Primary Affiliation with a hospital, clinic or nursing home. The Tables also list the employment status of those EMS attendants (Full Time, Part time, and Volunteer). The data is sorted by Population Density Region and Gender.

The percentage of female to male attendants is higher in the hospital environment at all levels of participation than in the ambulance or first responders. The ratio of male/female remains fairly constant until population density decreases to the level of Rural and Frontier where the female attendants increase.

**Table 10A: Urban EMS Hospital Affiliation by Employment Status**

<b>HOSPITAL</b>	1998			1999			2000			2001		
<b>URBAN</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Full Time	159	86	54%	157	81	52%	129	70	54%	127	68	54%
Part Time	76	27	36%	32	26	81%	71	23	32%	75	27	36%
Volunteer	19	8	42%	12	5	42%	10	4	40%	10	3	30%
Total	375	122	33%	313	114	36%	307	98	32%	212	98	46%

**Table 10B: Semi-Urban EMS Hospital Affiliation by Employment Status**

<b>HOSPITAL</b>	1998			1999			2000			2001		
<b>S-URBAN</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Full Time	67	34	51%	59	30	51%	48	26	54%	62	34	55%
Part Time	44	19	43%	41	15	37%	40	17	43%	39	14	36%
Volunteer	27	9	33%	15	5	33%	10	3	30%	12	4	33%
Total	200	63	32%	165	51	31%	144	47	33%	113	52	46%

**Table 10C: Densely-Settled Rural EMS Hospital Affiliation by Employment Status**

<b>HOSPITAL</b>	1998			1999			2000			2001		
<b>D-RURAL</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Full Time	131	65	50%	120	62	52%	111	60	54%	115	60	52%
Part Time	68	23	34%	67	21	31%	65	19	29%	60	22	37%
Volunteer	24	11	46%	24	9	38%	21	9	43%	20	10	50%
Total	322	100	31%	303	93	31%	285	89	31%	195	92	47%

**Table 10D: Rural EMS Hospital Affiliation by Employment Status**

<b>HOSPITAL</b>	1998			1999			2000			2001		
<b>RURAL</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Full Time	116	80	69%	108	79	73%	112	83	74%	112	85	76%
Part Time	47	27	57%	54	31	57%	49	26	53%	56	20	36%
Volunteer	71	41	58%	67	39	58%	57	33	58%	52	28	54%
Total	382	150	39%	378	151	40%	360	144	40%	220	133	60%

**Table 10E: Frontier EMS Hospital Affiliation by Employment Status**

<b>HOSPITAL</b>	1998			1999			2000			2001		
<b>FRONTIER</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Full Time	45	41	91%	43	38	88%	45	38	84%	39	32	82%
Part Time	30	18	60%	27	18	67%	27	17	63%	27	20	74%
Volunteer	29	15	52%	25	14	56%	25	15	60%	24	15	63%
Total	178	76	43%	165	72	44%	167	72	43%	90	67	74%

## SERVICE AFFILIATION: LICENCED AMBULANCE SERVICE

The following Tables (11A-11E) list the number of Kansas residents that are certified as EMS attendants with a Primary Affiliation with a licensed ambulance service. The Tables also list the employment status of those EMS attendants (Full Time, Part time, and Volunteer). The data is sorted by Population Density Region and Gender.

The percentage of female to male attendants increases as the regional population density decreases.

Table 11A lists the EMS attendants working relationship with ambulance services who are residents of Kansas, residing in a county designated as an Urban region. As of 2001 there has been a 32% increase in full time ambulance attendants since 1998. Volunteers have also increased as of 2001 by 22% since 1998. The part time levels remained relatively constant during this time period. Volunteers make up 30% of the work force for Densely Settled Region Ambulance services in 2001.

**Table 11A: Urban EMS Licenced Ambulance Service Affiliation  
by Employment Status**

<b>AMBULANCE</b>	1998			1999			2000			2001		
<b>URBAN</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Full Time	520	70	13%	586	76	13%	621	94	15%	679	99	15%
Part Time	79	29	37%	84	26	31%	89	23	26%	80	27	34%
Volunteer	134	73	54%	160	91	57%	146	84	58%	163	90	55%
Total	733	172	23%	830	193	23%	856	201	23%	922	216	23%

Table 11B lists the EMS attendants working relationship with ambulance services who are residents of Kansas, residing in a county designated as a Semi-Urban region. As of 2001 there has been a 13% increase in full time ambulance attendants since 1998. Volunteers increased as of 2001 by 29% since 1998 while part-time attendants increased 9% over this same time period. Volunteers make up 30% of the work force for Densely Settled Region Ambulance services in 2001.

**Table 11B: Semi-Urban EMS Licenced Ambulance Service Affiliation  
by Employment Status**

<b>AMBULANCE</b>	1998			1999			2000			2001		
<b>S-URBAN</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Full Time	295	39	13%	319	45	14%	326	43	13%	328	51	16%
Part Time	45	22	49%	43	24	56%	49	27	55%	60	27	45%
Volunteer	121	63	52%	126	68	54%	124	69	56%	128	73	57%
Total	461	124	27%	488	137	28%	499	139	28%	516	151	29%

Table 11C lists the EMS attendants working relationship with ambulance services who are residents of Kansas, residing in a county designated as a Densely-Settled-Rural region. As of 2001 there has been a 10% increase in full-time ambulance attendants since 1998. Volunteers increased as of 2001 by 12% since 1998 while part-time attendants remained relatively constant. Volunteers make up 43% of the work force for Densely Settled Region Ambulance services in 2001.

**Table 11C: Densely-Settled Rural EMS Licenced Ambulance Service Affiliation  
by Employment Status**

<b>AMBULANCE</b>	1998			1999			2000			2001		
<b>D-RURAL</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Full Time	297	79	27%	314	87	28%	310	84	27%	330	84	25%
Part Time	117	51	44%	128	57	45%	124	57	46%	110	55	50%
Volunteer	256	137	54%	291	145	50%	298	147	49%	298	145	49%
Total	670	267	40%	733	289	39%	732	288	39%	738	284	38%

Table 11D lists the EMS attendants working relationship with ambulance services who are residents of Kansas, residing in a county designated as a Rural region. The numbers of attendants as of 2001 have experienced slight increases since 1998 in all classifications. Volunteers make up 66% of the work force for Rural Ambulance services in 2001.

**Table 11D: Rural EMS Licenced Ambulance Service Affiliation  
by Employment Status**

<b>AMBULANCE</b>	1998			1999			2000			2001		
<b>RURAL</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Full Time	108	53	49%	114	61	54%	123	62	50%	135	62	46%
Part Time	106	81	76%	105	82	78%	105	84	80%	121	92	76%
Volunteer	419	360	86%	435	399	92%	426	395	93%	419	377	90%
Total	633	494	78%	654	542	83%	654	541	83%	675	531	79%

Table 11E lists the EMS attendants working relationship with ambulance services who are residents of Kansas, residing in a county designated as a Frontier region. The numbers of attendants as of 2001 have remained stable since 1998 with a slight decrease in part-time attendants with a more than off setting increase in volunteers. Volunteers make up 78% of the work force for Frontier region Ambulance services in 2001.

**Table 11E: Frontier EMS Licenced Ambulance Service Affiliation  
by Employment Status**

<b>AMBULANCE</b>	1998			1999			2000			2001		
<b>FRONTIER</b>	Male	Female		Male	Female		Male	Female		Male	Female	
Full Time	22	22	100%	22	18	82%	27	16	59%	27	21	78%
Part Time	45	56	124%	39	62	159%	37	62	168%	33	52	158%
Volunteer	259	214	83%	266	250	94%	255	250	98%	242	249	103%
Total	326	292	90%	327	330	101%	319	328	103%	302	322	107%

## **Bibliography**

1990 Census of Population and Housing: Summary Population and Housing Characteristics.

“State and Province Survey”, Emergency Medical Services, The Journal of Emergency Care, Rescue and Transportation, December 2001, pp.205-233.

“State and Province Survey”, Emergency Medical Services, The Journal of Emergency Care, Rescue and Transportation, December 2000, pp.207-233.

“State and Province Survey”, Emergency Medical Services, The Journal of Emergency Care, Rescue and Transportation, December 1999, pp.217-243.

“State and Province Survey”, Emergency Medical Services, The Journal of Emergency Care, Rescue and Transportation, December 1998, pp.204-230.

“Population Density Peer Groups”, Office of Local and Rural Health.

**Appendix A**  
**Data Collected by EMS Board**

## **Appendix A**

**Table A**  
**Data Collected by EMS Board**

Certification Level  
License Number  
Initial Certification Date  
Date of Last License Renewal  
Last Name  
First Name  
Middle Name  
Street Address  
City  
State  
Zip Code  
Home Phone  
Work Phone  
Date of Birth  
Sex  
EMS Involvement with an Ambulance Service  
EMS Involvement with an Organized First Response Unit  
EMS Involvement with a Hospital or Clinic  
EMS Attendant's Primary Affiliation  
Educational Preparation  
Certification Expiration Date  
Receiving Compensation\*  
Paid for Call Time\*  
Paid per Run\*  
Paid Hourly Rate\*  
Paid Salary\*

\*Included only in the 1999, 2000, and 2001 data set.

APPENDIX B

ADDITIONAL TABLES

**Table A**  
**National Ranking by Number of Persons Per EMS Attendant by State, 2001**

State	State Population for 1999	Number of EMS Attend.	Persons Per EMS	Rank	State	State Population for 1999	Number of EMS Attend.	Persons Per EMS	Rank
Alabama	3,990,221	11,098	359.5	38	Oklahoma	3,200,000	31,770	100.7	1
Alaska	630,000	4,650	135.5	2	Alaska	630,000	4,650	135.5	2
Arizona	4,100,000	11,329	361.9	39	D.C.	550,000	4,011	137.1	3
Arkansas	2,673,400	7,306	365.9	40	Montana	932,000	5,720	162.9	4
California	33,871,648	66,300	510.9	48	Wyoming	475,000	2,888	164.5	5
Colorado	4,000,000	17,812	224.6	18	Maryland	5,171,634	30,056	172.1	6
Connecticut	3,300,000	15,837	208.4	14	Nevada	2,119,360	12,185	173.9	7
D.C.	550,000	4,011	137.1	3	Minnesota	4,919,479	28,274	174.0	8
Delaware	666,200	1,582	421.1	46	South Dakota	696,004	3,832	181.6	9
Florida	14,500,000	36,473	397.6	42	Vermont	580,000	3,118	186.0	10
Georgia	7,500,000	12,200	614.8	50	Nebraska	1,570,000	8,003	196.2	11
Hawaii	1,300,000	1,278	1017.2	51	West Virginia	1,807,000	9,120	198.1	12
Idaho	1,228,684	3,932	312.5	35	Iowa	2,776,755	13,931	199.3	13
Illinois	11,430,600	27,934	409.2	44	Connecticut	3,300,000	15,837	208.4	14
Indiana	5,577,100	24,971	223.3	17	Rhode Island	990,000	4,740	208.9	15
Iowa	2,776,755	13,931	199.3	13	Virginia	7,078,515	33,605	210.6	16
Kansas	2,600,000	10,181	255.4	26	Indiana	5,577,100	24,971	223.3	17
Kentucky	3,900,000	15,387	253.5	24	Colorado	4,000,000	17,812	224.6	18
Louisiana	4,300,000	17,437	246.6	22	Utah	2,000,000	8,525	234.6	18
Maine	1,200,000	4,995	240.2	21	Pennsylvania	11,994,016	50,474	237.6	20
Maryland	5,171,634	30,056	172.1	6	Maine	1,200,000	4,995	240.2	21
Massachusetts	6,016,425	19,629	306.5	34	Louisiana	4,300,000	17,437	246.6	22
Michigan	9,200,000	32,489	283.2	29	North Dakota	638,800	2,581	247.5	23
Minnesota	4,919,479	28,274	174.0	8	Kentucky	3,900,000	15,387	253.5	24
Mississippi	2,600,000	6,223	417.8	45	Wisconsin	5,100,000	20,013	254.8	25
Missouri	5,233,857	10,000	523.4	49	Kansas	2,600,000	10,181	255.4	26
Montana	932,000	5,720	162.9	4	New Mexico	1,736,931	6,509	266.9	27
Nebraska	1,570,000	8,003	196.2	11	North Carolina	7,543,001	27,547	273.8	28
Nevada	2,119,360	12,185	173.9	7	Michigan	9,200,000	32,489	283.2	29
New Hampshire	1,200,000	3,998	300.2	32	New Jersey	8,414,350	29,200	288.2	30
New Jersey	8,414,350	29,200	288.2	30	Ohio	10,847,100	36,954	293.5	31
New Mexico	1,736,931	6,509	266.9	27	New Hampshire	1,200,000	3,998	300.2	32
New York	18,199,300	60,184	302.4	33	New York	18,199,300	60,184	302.4	33
North Carolina	7,543,001	27,547	273.8	28	Massachusetts	6,016,425	19,629	306.5	34
North Dakota	638,800	2,581	247.5	23	Idaho	1,228,684	3,932	312.5	35
Ohio	10,847,100	36,954	293.5	31	Tennessee	5,600,000	17,608	318.0	36
Oklahoma	3,200,000	31,770	100.7	1	Washington	5,685,300	17,346	327.8	37
Oregon	3,000,000	7,490	400.5	43	Alabama	3,990,221	11,098	359.5	38
Pennsylvania	11,994,016	50,474	237.6	20	Arizona	4,100,000	11,329	361.9	39
Rhode Island	990,000	4,740	208.9	15	Arkansas	2,673,400	7,306	365.9	40
South Carolina	3,760,181	7,621	493.4	47	Texas	18,967,764	50,458	375.9	41
South Dakota	696,004	3,832	181.6	9	Florida	14,500,000	36,473	397.6	42
Tennessee	5,600,000	17,608	318.0	36	Oregon	3,000,000	7,490	400.5	43
Texas	18,967,764	50,458	375.9	41	Illinois	11,430,600	27,934	409.2	44
Utah	2,000,000	8,525	234.6	19	Mississippi	2,600,000	6,223	417.8	45
Vermont	580,000	3,118	186.0	10	Delaware	666,200	1,582	421.1	46
Virginia	7,078,515	33,605	210.6	16	South Carolina	3,760,181	7,621	493.4	47
Washington	5,685,300	17,346	327.8	37	California	33,871,648	66,300	510.9	48
West Virginia	1,807,000	9,120	198.1	12	Missouri	5,233,857	10,000	523.4	49
Wisconsin	5,100,000	20,013	254.8	25	Georgia	7,500,000	12,200	614.8	50
Wyoming	475,000	2,888	164.5	5	Hawaii	1,300,000	1,278	1017.2	51
					<b>US</b>	<b>267,370,625</b>	<b>896,804</b>	<b>298.1</b>	

\*State and Province Survey, Emergency Medical Services, The Journal of Emergency Care, Rescue, and Transportation, December 2001.

**Table B**  
**Number of EMS Attendants by County Mailing Address,**  
**Persons Per EMS, and Ranking**  
**Kansas 2001**

County	County Population for 2001	Number of EMS Attend.	Persons per EMS	Rank	County	County Population for 2001	Number of EMS Attend.	Persons per EMS	Rank
Allen	14,385	53	271.4	80	Linn	9,570	44	217.5	65
Anderson	8,110	53	153.0	38	Logan	3,046	32	95.2	11
Atchison	16,774	46	364.7	96	Lyon	35,935	120	299.5	83
Barber	5,307	30	176.9	50	Marion	13,361	82	162.9	43
Barton	28,205	107	263.6	75	Marshall	10,965	61	179.8	52
Bourbon	15,379	41	375.1	97	McPherson	29,554	163	181.3	53
Brown	10,724	66	162.5	42	Meade	4,631	35	132.3	32
Butler	59,482	241	246.8	73	Miami	28,351	82	345.7	93
Chase	3,030	14	216.4	64	Mitchell	6,932	26	266.6	78
Chautauqua	4,359	28	155.7	39	Montgomery	36,252	139	260.8	74
Cherokee	22,605	65	347.8	94	Morris	6,104	18	339.1	92
Cheyenne	3,165	31	102.1	15	Morton	3,496	25	139.8	35
Clark	2,390	23	103.9	17	Nemaha	10,717	93	115.2	22
Clay	8,822	43	205.2	61	Neosho	16,997	45	377.7	98
Cloud	10,268	61	168.3	47	Ness	3,454	33	104.7	19
Coffey	8,865	72	123.1	29	Norton	5,953	21	283.5	81
Comanche	1,967	26	75.7	4	Osage	16,712	91	183.6	55
Cowley	36,291	135	268.8	79	Osborne	4,452	38	117.2	25
Crawford	38,242	71	538.6	103	Ottawa	6,163	35	176.1	49
Decatur	3,472	30	115.7	23	Pawnee	7,233	42	172.2	48
Dickinson	19,344	84	230.3	67	Phillips	6,001	77	77.9	5
Doniphan	8,249	35	235.7	70	Pottawatomie	18,209	88	206.9	62
Douglas	99,962	328	304.8	86	Pratt	9,647	29	332.7	90
Edwards	3,449	35	98.5	13	Rawlins	2,966	27	109.9	21
Elk	3,261	20	163.1	44	Reno	64,790	268	241.8	72
Ellis	27,507	91	302.3	85	Republic	5,835	22	265.2	76
Ellsworth	6,525	49	133.2	33	Rice	10,761	49	219.6	66
Finney	40,523	71	570.7	104	Riley	62,843	129	487.2	101
Ford	32,458	93	349.0	95	Rooks	5,685	49	116.0	24
Franklin	24,784	93	266.5	77	Rush	3,551	35	101.5	14
Geary	27,947	88	317.6	87	Russell	7,370	71	103.8	16
Gove	3,068	25	122.7	28	Saline	53,597	164	326.8	89
Graham	1,349	24	56.2	1	Scott	5,120	41	124.9	30
Grant	7,909	39	202.8	60	Sedgwick	452,869	1155	392.1	100
Gray	5,904	36	164.0	45	Seward	22,510	59	381.5	99
Greeley	1,534	26	59.0	2	Shawnee	169,871	564	301.2	84
Greenwood	7,673	54	142.1	36	Sheridan	2,813	23	122.3	27
Hamilton	2,670	17	157.1	41	Sherman	6,760	29	233.1	68
Harper	6,536	55	118.8	26	Smith	4,536	24	189.0	57
Harvey	32,869	184	178.6	51	Stafford	4,789	49	97.7	12
Haskell	4,307	34	126.7	31	Stanton	2,406	29	83.0	7
Hodgeman	2,085	26	80.2	6	Stevens	5,463	35	156.1	40
Jackson	12,657	54	234.4	69	Sumner	25,946	128	202.7	59
Jefferson	18,426	100	184.3	56	Thomas	8,180	45	181.8	54
Jewell	3,791	23	164.8	46	Trego	3,319	24	138.3	34
Johnson	451,086	855	527.6	102	Wabaunsee	6,885	66	104.3	18
Kearny	4,531	21	215.8	63	Wallace	1,749	26	67.3	3
Kingman	8,673	61	142.2	37	Washington	6,483	77	84.2	8
Kiowa	3,278	30	109.3	20	Wichita	2,531	27	93.7	10
Labette	22,835	70	326.2	88	Wilson	10,332	36	287.0	82
Lane	2,155	24	89.8	9	Woodson	3,788	19	199.4	58
Leavenworth	68,691	105	654.2	105	Wyandotte	157,882	473	333.8	91
Lincoln	3,578	15	238.5	71	<b>County Total</b>	<b>2,686,821</b>	<b>9,263</b>	<b>290.1</b>	

**Table C**  
**National Ranking by Number of Persons Per EMS Attendant by State, 2000**

State	State Population for 1999	Number of EMS Attend.	Persons Per EMS	Rank	State	State Population for 1999	Number of EMS Attend.	Persons Per EMS	Rank
Alabama	3,990,221	11,098	359.5	38	Oklahoma	3,200,000	31,770	100.7	1
Alaska	630,000	4,650	135.5	3	Montana	932,000	7,013	132.9	2
Arizona	4,100,000	11,329	361.9	39	Alaska	630,000	4,650	135.5	3
Arkansas	2,673,400	7,306	365.9	40	D.C.	550,000	4,001	137.5	4
California	33,871,648	60,570	559.2	49	Minnesota	4,919,479	28,520	172.5	5
Colorado	4,000,000	17,812	224.6	18	South Dakota	696,004	3,832	181.6	6
Connecticut	3,300,000	15,837	208.4	12	Maryland	5,171,634	28,366	182.3	7
D.C.	550,000	4,001	137.5	4	Nevada	2,119,360	11,583	183.0	8
Delaware	666,200	1,582	421.1	45	West Virginia	1,807,000	9,742	185.5	9
Florida	14,500,000	36,473	397.6	43	Nebraska	1,570,000	8,003	196.2	10
Georgia	7,500,000	12,200	614.8	50	Iowa	2,776,755	13,931	199.3	11
Hawaii	1,300,000	1,278	1017.2	51	Connecticut	3,300,000	15,837	208.4	12
Idaho	1,228,684	3,932	312.5	35	Rhode Island	990,000	4,740	208.9	13
Illinois	11,430,600	27,934	409.2	44	Vermont	580,000	2,762	210.0	14
Indiana	5,577,100	24,971	223.3	17	Virginia	7,078,515	33,435	211.7	15
Iowa	2,776,755	13,931	199.3	11	Pennsylvania	11,994,016	54,061	221.9	16
Kansas	2,600,000	10,157	256.0	25	Indiana	5,577,100	24,971	223.3	17
Kentucky	3,900,000	15,387	253.5	24	Colorado	4,000,000	17,812	224.6	18
Louisiana	4,300,000	17,437	246.6	22	Utah	2,000,000	8,525	234.6	19
Maine	1,200,000	5,060	237.2	21	Wyoming	475,000	2,010	236.3	20
Maryland	5,171,634	28,366	182.3	7	Maine	1,200,000	5,060	237.2	21
Massachusetts	6,016,425	19,629	306.5	33	Louisiana	4,300,000	17,437	246.6	22
Michigan	9,200,000	31,656	290.6	29	North Dakota	638,800	2,556	249.9	23
Minnesota	4,919,479	28,520	172.5	5	Kentucky	3,900,000	15,387	253.5	24
Mississippi	2,600,000	6,160	422.1	46	Kansas	2,600,000	10,157	256.0	25
Missouri	5,233,857	10,000	523.4	48	New Mexico	1,736,931	6,576	264.1	26
Montana	932,000	7,013	132.9	2	North Carolina	7,543,001	27,924	270.1	27
Nebraska	1,570,000	8,003	196.2	10	New Jersey	8,414,350	29,200	288.2	28
Nevada	2,119,360	11,583	183.0	8	Michigan	9,200,000	31,656	290.6	29
New Hampshire	1,200,000	3,998	300.2	31	Ohio	10,847,100	36,954	293.5	30
New Jersey	8,414,350	29,200	288.2	28	New Hampshire	1,200,000	3,998	300.2	31
New Mexico	1,736,931	6,576	264.1	26	New York	18,199,300	60,184	302.4	32
New York	18,199,300	60,184	302.4	32	Massachusetts	6,016,425	19,629	306.5	33
North Carolina	7,543,001	27,924	270.1	27	Wisconsin	5,100,000	16,400	311.0	34
North Dakota	638,800	2,556	249.9	23	Idaho	1,228,684	3,932	312.5	35
Ohio	10,847,100	36,954	293.5	30	Tennessee	5,600,000	16,980	329.8	36
Oklahoma	3,200,000	31,770	100.7	1	Washington	5,685,300	16,730	339.8	37
Oregon	3,000,000	7,980	375.9	42	Alabama	3,990,221	11,098	359.5	38
Pennsylvania	11,994,016	54,061	221.9	16	Arizona	4,100,000	11,329	361.9	39
Rhode Island	990,000	4,740	208.9	13	Arkansas	2,673,400	7,306	365.9	40
South Carolina	3,760,181	7,690	489.0	47	Texas	18,967,764	50,458	375.9	41
South Dakota	696,004	3,832	181.6	6	Oregon	3,000,000	7,980	375.9	42
Tennessee	5,600,000	16,980	329.8	36	Florida	14,500,000	36,473	397.6	43
Texas	18,967,764	50,458	375.9	41	Illinois	11,430,600	27,934	409.2	44
Utah	2,000,000	8,525	234.6	19	Delaware	666,200	1,582	421.1	45
Vermont	580,000	2,762	210.0	14	Mississippi	2,600,000	6,160	422.1	46
Virginia	7,078,515	33,435	211.7	15	South Carolina	3,760,181	7,690	489.0	47
Washington	5,685,300	16,730	339.8	37	Missouri	5,233,857	10,000	523.4	48
West Virginia	1,807,000	9,742	185.5	9	California	33,871,648	60,570	559.2	49
Wisconsin	5,100,000	16,400	311.0	34	Georgia	7,500,000	12,200	614.8	50
Wyoming	475,000	2,010	236.3	20	Hawaii	1,300,000	1,278	1017.2	51
					<b>US</b>	<b>267,370,625</b>	<b>888,382</b>	<b>301.0</b>	

\*State and Province Survey, Emergency Medical Services, The Journal of Emergency Care, Rescue, and Transportation, December 2000

**Table D**  
**Number of EMS Attendants by County Mailing Address,**  
**Persons Per EMS, and Ranking**  
**Kansas 2000**

County	County Population for 2000	Number of EMS Attend.	Persons per EMS	Rank	County	County Population for 2000	Number of EMS Attend.	Persons per EMS	Rank
Allen	14,385	46	312.7	89	Linn	9,570	43	222.6	68
Anderson	8,110	48	169.0	45	Logan	3,046	35	87.0	7
Atchison	16,774	52	322.6	94	Lyon	35,935	116	309.8	88
Barber	5,307	35	151.6	39	Marion	13,361	82	162.9	42
Barton	28,205	103	273.8	80	Marshall	10,965	62	176.9	50
Bourbon	15,379	37	415.6	100	McPherson	29,554	162	182.4	53
Brown	10,724	58	184.9	54	Meade	4,631	31	149.4	38
Butler	59,482	239	248.9	74	Miami	28,351	93	304.8	85
Chase	3,030	15	202.0	63	Mitchell	6,932	31	223.6	69
Chautauqua	4,359	28	155.7	40	Montgomery	36,252	133	272.6	79
Cherokee	22,605	88	256.9	75	Morris	6,104	19	321.3	92
Cheyenne	3,165	32	98.9	13	Morton	3,496	26	134.5	31
Clark	2,390	27	88.5	8	Nemaha	10,717	87	123.2	26
Clay	8,822	40	220.6	67	Neosho	16,997	50	339.9	96
Cloud	10,268	53	193.7	56	Ness	3,454	34	101.6	15
Coffey	8,865	66	134.3	30	Norton	5,953	23	258.8	76
Comanche	1,967	30	65.6	2	Osage	16,712	77	217.0	64
Cowley	36,291	135	268.8	78	Osborne	4,452	48	92.8	10
Crawford	38,242	78	490.3	101	Ottawa	6,163	31	198.8	59
Decatur	3,472	34	102.1	16	Pawnee	7,233	42	172.2	48
Dickinson	19,344	84	230.3	71	Phillips	6,001	85	70.6	4
Doniphan	8,249	41	201.2	62	Pottawatomie	18,209	92	197.9	58
Douglas	99,962	325	307.6	86	Pratt	9,647	30	321.6	93
Edwards	3,449	27	127.7	29	Rawlins	2,966	28	105.9	19
Elk	3,261	15	217.4	65	Reno	64,790	278	233.1	72
Ellis	27,507	98	280.7	81	Republic	5,835	20	291.8	82
Ellsworth	6,525	48	135.9	32	Rice	10,761	48	224.2	70
Finney	40,523	74	547.6	104	Riley	62,843	120	523.7	103
Ford	32,458	100	324.6	95	Rooks	5,685	53	107.3	21
Franklin	24,784	94	263.7	77	Rush	3,551	38	93.4	11
Geary	27,947	87	321.2	91	Russell	7,370	69	106.8	20
Gove	3,068	26	118.0	25	Saline	53,597	169	317.1	90
Graham	2,946	26	113.3	22	Scott	5,120	41	124.9	27
Grant	7,909	44	179.8	51	Sedgwick	452,869	1144	395.9	98
Gray	5,904	30	196.8	57	Seward	22,510	56	402.0	99
Greeley	1,534	22	69.7	3	Shawnee	169,871	550	308.9	87
Greenwood	7,673	45	170.5	46	Sheridan	2,813	20	140.7	35
Hamilton	2,670	16	166.9	43	Sherman	6,760	31	218.1	66
Harper	6,536	52	125.7	28	Smith	4,536	28	162.0	41
Harvey	32,869	164	200.4	61	Stafford	4,789	42	114.0	23
Haskell	4,307	37	116.4	24	Stanton	2,406	31	77.6	6
Hodgeman	2,085	28	74.5	5	Stevens	5,463	37	147.6	37
Jackson	12,657	54	234.4	73	Sumner	25,946	130	199.6	60
Jefferson	18,426	106	173.8	49	Thomas	8,180	49	166.9	44
Jewell	3,791	21	180.5	52	Trego	3,319	24	138.3	34
Johnson	451,086	814	554.2	105	Wabaunsee	6,885	69	99.8	14
Kearny	4,531	24	188.8	55	Wallace	1,749	30	58.3	1
Kingman	8,673	61	142.2	36	Washington	6,483	72	90.0	9
Kiowa	3,278	32	102.4	17	Wichita	2,531	27	93.7	12
Labette	22,835	77	296.6	83	Wilson	10,332	34	303.9	84
Lane	2,155	21	102.6	18	Woodson	3,788	22	172.2	47
Leavenworth	68,691	132	520.4	102	Wyandotte	157,882	445	354.8	97
Lincoln	3,578	26	137.6	33	<b>County Total</b>	<b>2,688,418</b>	<b>9,232</b>	<b>291.2</b>	

**Table E**  
**National Ranking by Number of Persons Per EMS Attendant by State, 1999**

State	State Population for 1999	Number of EMS Attend.	Persons Per EMS	Rank	State	State Population for 1999	Number of EMS Attend.	Persons Per EMS	Rank
Alabama	3,990,221	11,098	359.54	39	Oklahoma	3,200,000	31,770	100.72	1
Alaska	630,000	4,650	135.48	2	Alaska	630,000	4,650	135.48	2
Arizona	4,100,000	11,254	364.31	40	Montana	860,000	6,134	140.20	3
Arkansas	2,350,725	7,306	321.75	36	D.C.	555,000	3,711	149.56	4
California	33,494,000	60,300	555.46	49	Maryland	5,071,000	28,884	175.56	5
Colorado	4,000,000	19,600	204.08	15	Minnesota	4,735,830	26,150	181.10	6
Connecticut	3,286,100	17,685	185.81	10	South Dakota	696,004	3,832	181.63	7
D.C.	555,000	3,711	149.56	4	Virginia	6,666,167	36,577	182.25	8
Delaware	666,200	1,582	421.11	43	Iowa	2,776,755	15,004	185.07	9
Florida	14,500,000	29,228	496.10	46	Connecticut	3,286,100	17,685	185.81	10
Georgia	7,500,000	12,200	614.75	50	West Virginia	1,793,477	9,529	188.21	11
Hawaii	1,300,000	1,278	1017.21	51	Vermont	580,000	3,072	188.80	12
Idaho	1,228,684	3,932	312.48	34	Nevada	1,960,000	10,261	191.01	13
Illinois	11,430,600	27,934	409.20	42	Nebraska	1,570,000	8,003	196.18	14
Indiana	5,577,100	24,057	231.83	18	Colorado	4,000,000	19,600	204.08	15
Iowa	2,776,755	15,004	185.07	9	Rhode Island	990,000	4,795	206.47	16
Kansas	2,654,052	10,157	261.30	24	Pennsylvania	11,881,643	51,936	228.77	17
Kentucky	3,800,000	15,327	247.93	22	Indiana	5,577,100	24,057	231.83	18
Louisiana	4,300,000	17,437	246.60	21	Wyoming	475,000	2,010	236.32	19
Maine	1,200,000	5,000	240.00	20	Maine	1,200,000	5,000	240.00	20
Maryland	5,071,000	28,884	175.56	5	Louisiana	4,300,000	17,437	246.60	21
Massachusetts	6,016,425	19,629	306.51	32	Kentucky	3,800,000	15,327	247.93	22
Michigan	9,200,000	31,656	290.62	30	North Dakota	638,800	2,556	249.92	23
Minnesota	4,735,830	26,150	181.10	6	Kansas	2,654,052	10,157	261.30	24
Mississippi	2,600,000	6,160	422.08	44	North Carolina	7,543,001	28,792	261.98	25
Missouri	5,233,857	10,000	523.39	48	Utah	2,000,000	7,497	266.77	26
Montana	860,000	6,134	140.20	3	New Jersey	8,000,000	29,200	273.97	27
Nebraska	1,570,000	8,003	196.18	14	Ohio	10,847,100	39,319	275.87	28
Nevada	1,960,000	10,261	191.01	13	New Mexico	1,736,931	6,225	279.03	29
New Hampshire	1,100,000	3,519	312.59	35	Michigan	9,200,000	31,656	290.62	30
New Jersey	8,000,000	29,200	273.97	27	New York	18,199,300	60,184	302.39	31
New Mexico	1,736,931	6,225	279.03	29	Massachusetts	6,016,425	19,629	306.51	32
New York	18,199,300	60,184	302.39	31	Wisconsin	5,100,000	16,400	310.98	33
North Carolina	7,543,001	28,792	261.98	25	Idaho	1,228,684	3,932	312.48	34
North Dakota	638,800	2,556	249.92	23	New Hampshire	1,100,000	3,519	312.59	35
Ohio	10,847,100	39,319	275.87	28	Arkansas	2,350,725	7,306	321.75	36
Oklahoma	3,200,000	31,770	100.72	1	Tennessee	5,400,000	16,179	333.77	37
Oregon	3,000,000	6,640	451.81	45	Washington	5,685,300	16,730	339.83	38
Pennsylvania	11,881,643	51,936	228.77	17	Alabama	3,990,221	11,098	359.54	39
Rhode Island	990,000	4,795	206.47	16	Arizona	4,100,000	11,254	364.31	40
South Carolina	3,760,181	7,337	512.50	47	Texas	18,967,764	50,458	375.91	41
South Dakota	696,004	3,832	181.63	7	Illinois	11,430,600	27,934	409.20	42
Tennessee	5,400,000	16,179	333.77	37	Delaware	666,200	1,582	421.11	43
Texas	18,967,764	50,458	375.91	41	Mississippi	2,600,000	6,160	422.08	44
Utah	2,000,000	7,497	266.77	26	Oregon	3,000,000	6,640	451.81	45
Vermont	580,000	3,072	188.80	12	Florida	14,500,000	29,228	496.10	46
Virginia	6,666,167	36,577	182.25	8	South Carolina	3,760,181	7,337	512.50	47
Washington	5,685,300	16,730	339.83	38	Missouri	5,233,857	10,000	523.39	48
West Virginia	1,793,477	9,529	188.21	11	California	33,494,000	60,300	555.46	49
Wisconsin	5,100,000	16,400	310.98	33	Georgia	7,500,000	12,200	614.75	50
Wyoming	475,000	2,010	236.32	19	Hawaii	1,300,000	1,278	1017.21	51
					US	264,847,217	880,174	300.90	

\*State and Province Survey, Emergency Medical Services, The Journal of Emergency Care, Rescue, and Transportation, December 1999.

**Table F**  
**Number of EMS Attendants by County Mailing Address,**  
**Persons Per EMS, and Ranking**  
**Kansas 1999**

County	County Population for 2001	Number of EMS Attend.	Persons per EMS	Rank	County	County Population for 2001	Number of EMS Attend.	Persons per EMS	Rank
Allen	14,385	53	271.4	80	Linn	9,570	44	217.5	65
Anderson	8,110	53	153.0	38	Logan	3,046	32	95.2	11
Atchison	16,774	46	364.7	96	Lyon	35,935	120	299.5	83
Barber	5,307	30	176.9	50	Marion	13,361	82	162.9	43
Barton	28,205	107	263.6	75	Marshall	10,965	61	179.8	52
Bourbon	15,379	41	375.1	97	McPherson	29,554	163	181.3	53
Brown	10,724	66	162.5	42	Meade	4,631	35	132.3	32
Butler	59,482	241	246.8	73	Miami	28,351	82	345.7	93
Chase	3,030	14	216.4	64	Mitchell	6,932	26	266.6	78
Chautauqua	4,359	28	155.7	39	Montgomery	36,252	139	260.8	74
Cherokee	22,605	65	347.8	94	Morris	6,104	18	339.1	92
Cheyenne	3,165	31	102.1	15	Morton	3,496	25	139.8	35
Clark	2,390	23	103.9	17	Nemaha	10,717	93	115.2	22
Clay	8,822	43	205.2	61	Neosho	16,997	45	377.7	98
Cloud	10,268	61	168.3	47	Ness	3,454	33	104.7	19
Coffey	8,865	72	123.1	29	Norton	5,953	21	283.5	81
Comanche	1,967	26	75.7	4	Osage	16,712	91	183.6	55
Cowley	36,291	135	268.8	79	Osborne	4,452	38	117.2	25
Crawford	38,242	71	538.6	103	Ottawa	6,163	35	176.1	49
Decatur	3,472	30	115.7	23	Pawnee	7,233	42	172.2	48
Dickinson	19,344	84	230.3	67	Phillips	6,001	77	77.9	5
Doniphan	8,249	35	235.7	70	Pottawatomie	18,209	88	206.9	62
Douglas	99,962	328	304.8	86	Pratt	9,647	29	332.7	90
Edwards	3,449	35	98.5	13	Rawlins	2,966	27	109.9	21
Elk	3,261	20	163.1	44	Reno	64,790	268	241.8	72
Ellis	27,507	91	302.3	85	Republic	5,835	22	265.2	76
Ellsworth	6,525	49	133.2	33	Rice	10,761	49	219.6	66
Finney	40,523	71	570.7	104	Riley	62,843	129	487.2	101
Ford	32,458	93	349.0	95	Rooks	5,685	49	116.0	24
Franklin	24,784	93	266.5	77	Rush	3,551	35	101.5	14
Geary	27,947	88	317.6	87	Russell	7,370	71	103.8	16
Gove	3,068	25	122.7	28	Saline	53,597	164	326.8	89
Graham	1,349	24	56.2	1	Scott	5,120	41	124.9	30
Grant	7,909	39	202.8	60	Sedgwick	452,869	1155	392.1	100
Gray	5,904	36	164.0	45	Seward	22,510	59	381.5	99
Greeley	1,534	26	59.0	2	Shawnee	169,871	564	301.2	84
Greenwood	7,673	54	142.1	36	Sheridan	2,813	23	122.3	27
Hamilton	2,670	17	157.1	41	Sherman	6,760	29	233.1	68
Harper	6,536	55	118.8	26	Smith	4,536	24	189.0	57
Harvey	32,869	184	178.6	51	Stafford	4,789	49	97.7	12
Haskell	4,307	34	126.7	31	Stanton	2,406	29	83.0	7
Hodgeman	2,085	26	80.2	6	Stevens	5,463	35	156.1	40
Jackson	12,657	54	234.4	69	Sumner	25,946	128	202.7	59
Jefferson	18,426	100	184.3	56	Thomas	8,180	45	181.8	54
Jewell	3,791	23	164.8	46	Trego	3,319	24	138.3	34
Johnson	451,086	855	527.6	102	Wabaunsee	6,885	66	104.3	18
Kearny	4,531	21	215.8	63	Wallace	1,749	26	67.3	3
Kingman	8,673	61	142.2	37	Washington	6,483	77	84.2	8
Kiowa	3,278	30	109.3	20	Wichita	2,531	27	93.7	10
Labette	22,835	70	326.2	88	Wilson	10,332	36	287.0	82
Lane	2,155	24	89.8	9	Woodson	3,788	19	199.4	58
Leavenworth	68,691	105	654.2	105	Wyandotte	157,882	473	333.8	91
Lincoln	3,578	15	238.5	71	<b>County Total</b>	<b>2,686,821</b>	<b>9,263</b>	<b>290.1</b>	

**Table G**  
**National Ranking by Number of Persons Per EMS Attendant by State, 1998**

State	State Population for 1999	Number of EMS Attend.	Persons Per EMS	Rank	State	State Population for 1999	Number of EMS Attend.	Persons Per EMS	Rank
Alabama	3,990,221	11,098	359.54	40	Oklahoma	3,200,000	30,664	104.36	1
Alaska	609,000	4,650	130.97	2	Alaska	609,000	4,650	130.97	2
Arizona	4,100,000	11,321	362.16	41	Montana	860,000	6,431	133.73	3
Arkansas	2,350,725	6,050	388.55	43	Maryland	5,071,000	34,098	148.72	4
California	33,252,000	60,300	551.44	49	D.C.	550,000	3,681	149.42	5
Colorado	3,750,000	15,865	236.37	19	Nebraska	1,570,000	9,037	173.73	6
Connecticut	3,286,100	17,931	183.26	9	Minnesota	4,567,118	26,150	174.65	7
D.C.	550,000	3,681	149.42	5	South Dakota	696,004	3,832	181.63	8
Delaware	666,200	2,010	331.44	36	Connecticut	3,286,100	17,931	183.26	9
Florida	14,500,000	30,125	481.33	46	Vermont	567,000	3,020	187.75	10
Georgia	7,500,000	11,300	663.72	50	West Virginia	1,793,477	9,524	188.31	11
Hawaii	1,300,000	1,233	1054.34	51	Virginia	6,666,167	34,678	192.23	12
Idaho	1,189,251	4,415	269.37	28	Iowa	2,776,755	14,358	193.39	13
Illinois	11,430,600	27,934	409.20	45	Indiana	5,577,100	27,815	200.51	14
Indiana	5,577,100	27,815	200.51	14	New Jersey	7,945,000	38,700	205.30	15
Iowa	2,776,755	14,358	193.39	13	Kentucky	3,800,000	18,300	207.65	16
Kansas	2,600,000	10,157	255.98	25	Rhode Island	990,000	4,338	228.22	17
Kentucky	3,800,000	18,300	207.65	16	Wyoming	475,000	2,010	236.32	18
Louisiana	4,300,000	17,437	246.60	21	Colorado	3,750,000	15,865	236.37	19
Maine	1,200,000	4,841	247.88	22	Pennsylvania	11,881,643	50,196	236.70	20
Maryland	5,071,000	34,098	148.72	4	Louisiana	4,300,000	17,437	246.60	21
Massachusetts	6,016,425	19,629	306.51	32	Maine	1,200,000	4,841	247.88	22
Michigan	9,200,000	31,656	290.62	30	Nevada	1,550,000	6,240	248.40	23
Minnesota	4,567,118	26,150	174.65	7	North Dakota	638,800	2,556	249.92	24
Mississippi	2,600,000	6,484	400.99	44	Kansas	2,600,000	10,157	255.98	25
Missouri	5,233,857	10,000	523.39	47	New Mexico	1,515,000	5,842	259.33	26
Montana	860,000	6,431	133.73	3	Utah	2,000,000	7,497	266.77	27
Nebraska	1,570,000	9,037	173.73	6	Idaho	1,189,251	4,415	269.37	28
Nevada	1,550,000	6,240	248.40	23	North Carolina	7,543,001	27,481	274.48	29
New Hampshire	1,100,000	3,519	312.59	35	Michigan	9,200,000	31,656	290.62	30
New Jersey	7,945,000	38,700	205.30	15	New York	18,199,300	60,184	302.39	31
New Mexico	1,515,000	5,842	259.33	26	Massachusetts	6,016,425	19,629	306.51	32
New York	18,199,300	60,184	302.39	31	Ohio	10,847,100	34,926	310.57	33
North Carolina	7,543,001	27,481	274.48	29	Wisconsin	5,100,000	16,400	310.98	34
North Dakota	638,800	2,556	249.92	24	New Hampshire	1,100,000	3,519	312.59	35
Ohio	10,847,100	34,926	310.57	33	Delaware	666,200	2,010	331.44	36
Oklahoma	3,200,000	30,664	104.36	1	Washington	5,685,300	16,639	341.69	37
Oregon	2,690,000	7,832	343.46	39	Tennessee	5,400,000	15,730	343.29	38
Pennsylvania	11,881,643	50,196	236.70	20	Oregon	2,690,000	7,832	343.46	39
Rhode Island	990,000	4,338	228.22	17	Alabama	3,990,221	11,098	359.54	40
South Carolina	3,760,181	7,165	524.80	48	Arizona	4,100,000	11,321	362.16	41
South Dakota	696,004	3,832	181.63	8	Texas	18,967,764	50,458	375.91	42
Tennessee	5,400,000	15,730	343.29	38	Arkansas	2,350,725	6,050	388.55	43
Texas	18,967,764	50,458	375.91	42	Mississippi	2,600,000	6,484	400.99	44
Utah	2,000,000	7,497	266.77	27	Illinois	11,430,600	27,934	409.20	45
Vermont	567,000	3,020	187.75	10	Florida	14,500,000	30,125	481.33	46
Virginia	6,666,167	34,678	192.23	12	Missouri	5,233,857	10,000	523.39	47
Washington	5,685,300	16,639	341.69	37	South Carolina	3,760,181	7,165	524.80	48
West Virginia	1,793,477	9,524	188.31	11	California	33,252,000	60,300	551.44	49
Wisconsin	5,100,000	16,400	310.98	34	Georgia	7,500,000	11,300	663.72	50
Wyoming	475,000	2,010	236.32	18	Hawaii	1,300,000	1,233	1054.34	51
					US	263,057,089	883,737	297.66	

"State and Province Survey", Emergency Medical Services, The Journal of Emergency Care, Rescue and Transportation, December 1998.

**Table H**  
**Number of EMS Attendants by County Mailing Address,**  
**Persons Per EMS, and Ranking**  
**Kansas 1998**

County	County Population for 2000	Number of EMS Attend.	Persons per EMS	Rank	County	County Population for 2000	Number of EMS Attend.	Persons per EMS	Rank
Allen	14,556	47	309.7	91	Linn	9,158	45	203.5	60
Anderson	8,060	53	152.1	39	Logan	2,987	30	99.6	17
Atchison	16,908	47	359.7	96	Lyon	33,920	118	287.5	82
Barber	5,342	34	157.1	41	Marion	28,630	79	362.4	97
Barton	27,641	100	276.4	78	Marshall	13,593	58	234.4	75
Bourbon	15,260	38	401.6	100	McPherson	11,006	162	67.9	3
Brown	11,070	58	190.9	52	Meade	4,424	26	170.2	46
Butler	61,932	247	250.7	76	Miami	26,597	93	286.0	81
Chase	2,950	20	147.5	37	Mitchell	6,936	33	210.2	65
Chautauqua	4,360	22	198.2	56	Montgomery	37,089	137	270.7	77
Cherokee	22,552	98	230.1	72	Morris	6,169	20	308.5	89
Cheyenne	3,174	32	99.2	16	Morton	3,440	32	107.5	24
Clark	2,361	22	107.3	23	Nemaha	10,132	87	116.5	26
Clay	9,148	31	295.1	87	Neosho	16,760	49	342.0	94
Cloud	10,027	52	192.8	55	Ness	3,607	35	103.1	19
Coffey	8,696	68	127.9	31	Norton	5,752	28	205.4	61
Comanche	2,012	31	64.9	2	Osage	17,139	83	206.5	62
Cowley	36,319	157	231.3	73	Osborne	4,712	45	104.7	20
Crawford	36,360	83	438.1	101	Ottawa	5,905	35	168.7	45
Decatur	3,456	39	88.6	11	Pawnee	7,437	39	190.7	51
Dickinson	19,742	91	216.9	69	Phillips	6,080	71	85.6	10
Doniphan	7,856	41	191.6	54	Pottawatomie	18,691	87	214.8	66
Douglas	93,137	322	289.2	84	Pratt	9,700	29	334.5	93
Edwards	3,312	27	122.7	27	Rawlins	3,125	37	84.5	9
Elk	3,351	19	176.4	47	Reno	63,211	280	225.8	70
Ellis	26,309	85	309.5	90	Republic	6,102	21	290.6	85
Ellsworth	6,285	46	136.6	35	Rice	10,360	48	215.8	67
Finney	36,514	69	529.2	104	Riley	63,615	135	471.2	102
Ford	29,382	102	288.1	83	Rooks	5,660	60	94.3	12
Franklin	24,768	108	229.3	71	Rush	3,413	47	72.6	6
Geary	25,370	90	281.9	79	Russell	7,558	77	98.2	15
Gove	3,054	24	127.3	29	Saline	51,617	172	300.1	88
Graham	3,204	25	128.2	32	Scott	5,018	39	128.7	34
Grant	8,012	37	216.5	68	Sedgwick	448,050	1179	380.0	99
Gray	5,595	37	151.2	38	Seward	19,984	58	344.6	95
Greeley	1,704	25	68.2	4	Shawnee	165,348	532	310.8	92
Greenwood	8,139	40	203.5	59	Sheridan	2,741	18	152.3	40
Hamilton	2,343	10	234.3	74	Sherman	6,511	31	210.0	64
Harper	6,430	56	114.8	25	Smith	4,588	24	191.2	53
Harvey	34,361	165	208.2	63	Stafford	5,000	49	102.0	18
Haskell	3,976	42	94.7	14	Stanton	2,265	28	80.9	8
Hodgeman	2,209	32	69.0	5	Stevens	5,371	42	127.9	30
Jackson	12,130	61	198.9	57	Sumner	27,043	134	201.8	58
Jefferson	18,243	101	180.6	48	Thomas	8,037	43	186.9	49
Jewell	3,867	24	161.1	43	Trego	3,283	20	164.2	44
Johnson	429,563	816	526.4	103	Wabaunsee	6,651	63	105.6	21
Kearny	4,177	26	160.7	42	Wallace	1,802	36	50.1	1
Kingman	8,543	58	147.3	36	Washington	6,490	61	106.4	22
Kiowa	3,470	27	128.5	33	Wichita	2,643	28	94.4	13
Labette	23,030	79	291.5	86	Wilson	10,218	36	283.8	80
Lane	2,264	28	80.9	7	Woodson	3,983	21	189.7	50
Leavenworth	71,299	123	579.7	105	Wyandotte	152,355	405	376.2	98
Lincoln	3,338	27	123.6	28	<b>County Total</b>	<b>2,629,067</b>	<b>9,287</b>	<b>283.1</b>	

**Table I: Density Distribution of Counties**  
**The distribution of counties to one out of five density regions:**

URBAN (150 or More)	SEMI-URBAN (40-149.9)	DENSELY- SETTLED RURAL (20-39.9)	RURAL (6-19.9)	FRONTIER (Less Than 6)
Douglas	Crawford	Allen	Anderson	Barber
Johnson	Geary	Atchison	Brown	Chase
Sedgwick	Harvey	Barton	Chautauqua	Cheyenne
Shawnee	Leavenworth	Bourbon	Clay	Clark
Wyandotte	Lyon	Butler	Cloud	Comanche
	Montgomery	Cherokee	Coffey	Decatur
	Reno	Cowley	Doniphan	Edwards
	Riley	Dickinson	Ellsworth	Elk
	Saline	Ellis	Grant	Gove
		Finney	Gray	Graham
		Ford	Greenwood	Greeley
		Franklin	Harper	Hamilton
		Jefferson	Haskell	Hodgeman
		Labette	Jackson	Jewell
		McPherson	Kingman	Kearny
		Miami	Linn	Kiowa
		Neosho	Marion	Lane
		Osage	Marshall	Lincoln
		Pottawatomie	Mitchell	Logan
		Seward	Morris	Meade
		Sumner	Nemaha	Morton
			Norton	Ness
			Ottawa	Osborne
			Pawnee	Rawlins
			Phillips	Rush
			Pratt	Sheridan
			Republic	Smith
			Rice	Stanton
			Rooks	Trego
			Russell	Wallace
			Scott	Wichita
			Sherman	
			Stafford	
			Stevens	
			Thomas	
			Wabaunsee	
			Washington	
			Wilson	
			Woodson	

**User Notes:** The Office of Health Care Information has adopted the population density peer groups as defined by the Office of Local and Rural Health for use in the present publication.

1. While areas are often grouped into “rural” and “urban” categories when studying demographic, health, or social indicators, experts disagree on the definition of “rural”. For the purposes of the *CHP*, the Office of Local and Rural Health (OLRH) has adopted the previously stated definitions (see page 3). “Less than six persons per square mile” is a widely recognized definition for “frontier”, or sparsely populated, areas. Other delineations were chosen because they seemed to provide adequate breaking points for grouping Kansas counties and were comparable with other rural/urban definitions based on population density.
2. The OLRH definitions of “rural” and “urban” should *not* be confused with the U.S. Census Bureau definitions.
3. Counties were assigned to population density peer groups based on one factor only: population density. Counties in the same peer group will not necessarily have similar values for other indicators. The peer groups allow you to see how your county differs from others of the same size on a wide variety of indicators.
4. Population Density Peer Group is often referred to as “Peers” in tables and graphs. For purposes of this report, “Peers” are referred to as “Regions”.